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09/605,553	06/27/2000	David Black	E0295/7119 MBL	5747

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EXAMINER

ABEL JALIL, NEVEEN

ART UNIT

PAPER NUMBER

2175

DATE MAILED: 08/28/2003

A

Please find below and/or attached an Office communication concerning this application or proceeding.

3

Office Action Summary

Application No.

09/605,553

Applicant(s)

BLACK, DAVID

Examiner

Neveen Abel-Jalil

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

SAM RIMELL

PRIMARY EXAMINER

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because in the abstract, line 1, "is disclosed" should be deleted. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

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Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims ¹⁻³²~~1-23~~ are rejected under 35 U.S.C. 102(e) as being anticipated by Blumenau et al. (U.S. Pub. No. 2002/0194294 A1).

As to claim 1, Blumenau et al. discloses a method of accessing a logical volume stored on at least one of a plurality of storage elements (See page 4, paragraph 0060), the method comprising steps of:

specifying an ELVID for the logical volume (See page 5, paragraph 0070, also see page 7, paragraph 0087);

specifying a physical storage address for the logical volume (See page 2, paragraph 0015); and

verifying that the ELVID corresponds to the physical storage address (See page 2, paragraph 0013, also see page 5, paragraphs 0069-0070).

As to claim 2, Blumenau et al. discloses comprising a step of maintaining an ELVID database that includes ELVIDs and a corresponding physical storage location (See page 5, paragraphs 0068-0070, also see page 12, paragraph 0122, and page 13, paragraph 0123).

As to claim 3, Blumenau et al. discloses the step of specifying an ELVID and the step of specifying a physical storage address are performed by a host computer accessing

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the logical volume (See page 13, paragraphs 0126-0127, also see page 13, paragraph 0123).

As to claim 4, Blumenau et al. discloses the step of verifying is performed by one of the storage elements (See page 10, paragraph 0103).

As to claim 5, Blumenau et al. discloses comprising a step of maintaining an ELVID database at each storage element, the respective ELVID database including ELVIDs stored at the respective storage element and a corresponding physical storage location (See page 5, paragraphs 0068-0070, also see page 12, paragraph 0122, and page 13, paragraph 0123).

As to claim 6, Blumenau et al. discloses the step of verifying is performed by a storage management controller (See page 4, paragraph 0058, also see page 4, paragraphs 0048-0051).

As to claim 7, Blumenau et al. discloses the step of verifying is performed by one of the storage elements (See page 10, paragraph 0103).

As to claim 8, Blumenau et al. discloses the logical volume is a conventional logical volume (See page 4, paragraphs 0060-0062, wherein “conventional logical volume” reads on “RAID”).

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As to claim 9, Blumenau et al. discloses wherein the logical volume is a component of a conventional logical volume (See page 4, paragraph 0062).

As to claim 10, Blumenau et al. discloses wherein the logical volume is a hyper-volume (See page 10, paragraphs 0105-0106).

As to claim 11, Blumenau et al. discloses wherein the logical volume is a striped volume (See page 4, paragraph 0062, also see page 18, paragraph 0167).

As to claim 12, Blumenau et al. discloses wherein the logical volume is a partition (See page 12, paragraph 0119, also see page 4, paragraph 0062).

As to claim 13, Blumenau et al. discloses comprising a step of assuring that the entity accessing the logical volume is authorized to do so (See page 15, paragraph 0140, also see page 20, paragraphs 0203-0205, also see page 10, paragraph 0101).

As to claim 14, Blumenau et al. discloses comprising a step of maintaining an ELVID database at each storage element (See page 5, paragraph 0068), the respective ELVID database including ELVIDs and entities permitted to access the logical volume corresponding to the respective ELVID (See pages 9-10, paragraphs 0100-0101).

As to claim 15, Blumenau et al. discloses a method of accessing a logical volume stored on at least one of a plurality of storage elements (See page 5, paragraph 0068), the method comprising steps of:

specifying an ELVID for the logical volume (See page 5, paragraph 0070, also see page 7, paragraph 0087);

specifying a physical storage address for the logical volume (See page 2, paragraph 0015); and

using the ELVID to assure that an entity requesting access to the logical volume is authorized to do so (See page 2, paragraph 0013, also see page 5, paragraphs 0069-0070).

As to claim 16, Blumenau et al. discloses the step of specifying an ELVID and the step of specifying a physical storage address are performed by a host computer accessing the logical volume (See page 5, paragraphs 0069-0070).

As to claim 17, Blumenau et al. discloses wherein the step of using is performed by one of the storage elements (See page 10, paragraph 0103).

As to claim 18, Blumenau et al. discloses wherein the step of using comprises a step of accessing an ELVID database (See page 7, paragraphs 0085-0087).

As to claim 19, Blumenau et al. discloses the step of using is performed by a storage management controller (See page 2, paragraph 0014).

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As to claim 20, Blumenau et al. discloses the step of using is performed by one of the storage elements (See page 2, paragraph 0015).

As to claim 21, Blumenau et al. discloses further comprising a step of maintaining an ELVID database at each storage element (See page 5, paragraph 0068, also see page 18, paragraph 0170), the respective ELVID database including ELVIDs and entities permitted to access the logical volume corresponding to the respective ELVID (See pages 9-10, paragraphs 0100-0101).

As to claim 22, Blumenau et al. discloses the step of using comprises a step of accessing an ELVID database (See page 5, paragraph 0068, also see page 18, paragraph 0170), the ELVID database including ELVIDs and entities permitted to access the logical volume corresponding to the respective ELVID (See pages 9-10, paragraphs 0100-0101).

As to claim 23, Blumenau et al. discloses wherein the entities are user accounts (See page 20, paragraph 0206).

As to claim 24, Blumenau et al. discloses wherein the entities are host computers (See page 21, paragraph 0210, also see page 1, paragraphs 0008-0009, also see page 4, paragraph 0048).

As to claim 25, Blumenau et al. discloses wherein the entities are applications running on host computers (See page 5, paragraph 0065, also see page 1, paragraph 0005).

As to claim 26, Blumenau et al. discloses a host computer (See page 2, paragraph 0011), comprising:

a processing unit (See page 23, paragraph 0230); and

an ELVID interface module to transmit access requests for logical volumes, the access requests including an ELVID for the logical volume and a respective physical storage location (See page 16, paragraph 0146, also see page 19, paragraph 0195).

As to claim 27, Blumenau et al. discloses a storage device comprising:

a storage medium to store data corresponding to logical volumes (See page 23, paragraph 0235, also see page 5, paragraph 0070); and

an ELVID verifier module to verify that an access request to a physical storage location on the storage medium is directed to the correct logical volume as identified by an ELVID (See page 21, paragraphs 0213-0214, also see page 5, paragraph 0068, also see page 9, paragraph 0095, and page 9, paragraph 0099).

As to claim 28, Blumenau et al. discloses comprising an ELVID database including ELVIDs for logical volumes stored on the storage device (See page 23, paragraph 0235, also see page 5, paragraphs 0068-0070) and a corresponding physical storage location (See page 16, paragraph 0146, also see page 19, paragraph 0195).

As to claim 29, Blumenau et al. discloses a storage device comprising:

a storage medium to store data corresponding to logical volumes (See pages 6-7, paragraphs 0079-0080, also see page 5, paragraph 0070); and

an ELVID authorization module to verify that an access request to a physical storage location on the storage medium is received from an entity permitted to access the logical volume with a corresponding ELVID (See pages 7-8, paragraph 0087, also see page 2, paragraph 0013, also see 21, paragraphs 0213-0215).

As to claim 30, Blumenau et al. discloses comprising a storage medium to hold an ELVID database (See page 5, paragraph 0068), the ELVID database including ELVIDs and entities permitted to access the logical volume corresponding to the respective ELVID (See pages 9-10, paragraphs 0100-0101).

As to claim 31, Blumenau et al. discloses a computer system comprising:

at least one host computer (See page 24, claim 11 language);

a plurality of storage elements (See page 1, paragraph 0007), and

means for associating ELVIDs with requests for access to logical volumes (See page 5, paragraphs 0068-0069, also see page 9, paragraphs 0095-0096); and

means for verifying that access requests to physical storage locations are made to the appropriate logical volume identified by a respective ELVID (See pages 9-10, paragraphs 0100-0101).

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As to claim 32, Blumenau et al. discloses a computer system (See page 25, claim 24 language) comprising:

at least one host computer (See page 24, claim 11 language);
a plurality of storage elements (See page 1, paragraph 0007); and
means for verifying that access requests to logical volumes having an associated ELVID (See page 5, paragraph 0068) are made by an entity authorized to access the logical volume (See page 24, claims 6-8 language).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Duffy et al. (U.S. Patent No. 5,836,910) teaches method for logical addressing in a modular patient care system.

Pannell et al. (U.S. Patent No. 6,208,644 B1) teaches network switch providing dynamic load balancing.

Tamer et al. (U.S. Pub. No. 2003/0130986 A1) teaches system for detecting the mapping of logical objects in a data storage system.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 703-305-8114. The examiner can normally be reached on 8:00AM-4: 30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Neveen Abel-Jalil
August 22, 2003



SAM RIMELL
PRIMARY EXAMINER